CropPest Ontario

Agriculture Development Branch
Editor—Albert Tenuta– Field Crop Pathologist
www.omafra.gov.on.ca/croppest

ISSN 1203-2204 VOLUME NO. 17, ISSUE NO. 01 May 14 2012

"IN THIS ISSUE"

- Pre-plant Dandelion Control In Soybeans
- WBC Trapping Network
- Alfalfa Weevil and Black Cutworm
- SWCDD
- 2012 Testing Results for Herbicide Resistant Weeds
- Everyone Knows It's Windy
- Weevils and Whatnot!
- Efficacy of Wheat Diseases

Comments, suggestions or articles are welcome. To be added to the distribution list please contact:

Albert Tenuta or Mirjam Hall
Phone 519-674-1690
Fax 519-674-1564
albert.tenuta@ontario.ca or mirjam.hall@ontario.ca

Pre-plant Dandelion Control in Soybeans

Mike Cowbrough, Weed Management, Field Crop, Program Lead, OMAFRA, Guelph

The majority of growers, crop consultants and researchers will tell you that it is always better to manage dandelions in the fall then in the spring. Fall management simply is more effective.

However, if you were unable to control dandelions in the fall, by early May those fields are usually a sea of yellow. And since there is only so much dandelion jam and ice cream one can make, when soybean planting is imminent you want to remove those dandelions as quickly as possible.

Scenario 1: My goal is to have the best control at the end of the season.

If the priority is to maximize the control of established dandelion and have residual control to inhibit germination of seedling dandelions then one of the best treatments

.....continued on page 9

PIONEER. A DuPont Company
Hyland Seeds BUILDING
NK syngenta
BAYER Bayer CropScience
FS
MONSANTO im ine
BASF The Chemical Company

Western Bean Cutworm Trapping Network

Tom Cowan, Field Crop Entomologist, OMAFRA, Ridgetown

As we gear up for the 2012 season we are again looking for participants in the Western Bean Cutworm Trap Network monitoring program. Of particular need is to have more traps in Elgin and Haldimand/Norfolk County. Information on the trap network can be found on the Canadian Corn Pest Coalition website. (http://www.cornpest.ca) (If you would like to participate e-mail wbctrapnetwork@gmail.com or contact Tom Cowan at 519-674-1696 or Jen Bruggeman at 519-360-7374.

OMAFRA Field Crop Staff Working for You!

Dawn Pate	Manager—Field Crops	519-826-3257
Joel Bagg	Forage Specialist	705-324-5856
Scott Banks	Emerging Crops Specialist	613-258-8359
Tom Cowan	Entomology, Field Crops Program Lead (A)	519-674-1696
Horst Bohner	Soybean Specialist	519-271-5858
Christine Brown	Nutrient Management Field Crop Program Lead	519-537-8305
Mike Cowbrough	Weed Management Field Crops Program Lead	519-824-4120 ext.52580
Brian Hall	Edible Beans & Canola Specialist	519-271-0083
Peter Johnson	Cereals Specialist	519-271-8180
Adam Hayes	Soil Management Specialist—Field Crops	519-674-1621
Ian McDonald	Applied Research Coordinator-Field Crops	519-824-4120 ext 56707
Gilles Quesnel	IPM Program Lead-Field Crops (Bilingual)	613-258-8250
Greg Stewart	Corn Industry Program Lead	519-824-4120 ext 54865
Albert Tenuta	Pathologist - Field Crops Program Lead	519-674-1617

Field Crop News

New!

Visit the Fieldcropnews Website at

fieldcropnews.com/

About Field Crop News:

"Field Crop News" is an archive of information dedicated to the production of over 8.5 million acres of field crops in Ontario and a forum for which producers, researchers and industry personnel can share information and ideas. The crop technology team, with the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), faculty at the University of Guelph and Ontario field crop producers continually work together to find ways to improve field crop production. The key learning and outcomes from these collaborations are captured at "Field Crop News".

Alfalfa Weevil and Black Cutworm

Tom Cowan, Field Crop Entomologist, OMAFRA, Ridgetown

Alfalfa Weevil

Reports from Michigan and Iowa indicate that alfalfa weevils were activity is early this year. We've had some fairly warm weather earlier this spring and the weevils likely have had a bit of a head start. I was out in some fields in Oxford this week and I found some early instar larvae so the weevils are out there. Start your scouting program early this year. Check out the Agronomy Guide for Field Crops publication 812 for scouting tips and control thresholds. http://www.omafra.gov.on.ca/english/crops/pub812/3weevil.htm

Black Cutworm

Black cutworms were being caught in high numbers in Indiana over the last few weeks and Pennsylvania has reported minor activity with catches increasing in some areas. These moths no not over winter in Ontariobut are brought in on strong storm systems that come up from the South. Black cutworm females will lay their eggs in low-growing green vegetation (particularly chick weed) and fields with weed growth are tempting places for these moths to land and lay eggs. Later planted corn is at a higher risk of damage from the cutworms since the insects are much larger when the corn seedlings emerge. Bt hybrids that contain Vip3A (Agrisure Viptera 3110 / 3111) provide good control and hybrids that contain Cry1F (Genutiy, SmartStax, Herculex I, Herculex XTRA, SmartStax and Optimum products) may only provide some suppression of younger larvae. Rescue treatments can be effective if infestations are found in time.

Considering that the migratory insects such as the red admiral butterfly are about 2 weeks early this year, storm fronts from the south are likely to bring up BCW a bit earlier. Expect to be scouting once the corn is up. For more information on black cutworm visit the following link: http://bit.ly/Jpxtw6

Other things to look for:

Cereal leaf beetle adults have been found in the Alliston area though the numbers are not at thresholds.

Southwest Crop Diagnostic Days

2012

SWCDD

Save the Date!
Further details to Follow

Wednesday, July 4th and Thursday, July 5th

www.diagnosticdays.ca

2012 Testing Results for Herbicide Resistant Weeds

Mike Cowbrough, Weed Management Field Crops Program Lead, OMAFRA, Guelph

There continues to be a number of fields in Ontario with herbicide resistant weed populations which makes adequate control of these "bio types" more challenging. Both the Guide to Weed Control and the mobile web application weedpro75 will provide alternative herbicides that will provide a short term reprieve. For the long term, we must strive for the adoption and development of non chemical options.

Glyphosate resistant weeds continue to be the attention grabbing species. Below is the summary of glyphosate resistance testing that has been done by the University of Guelph since 2009.

Giant ragweed:

http://www.weedinfo.ca/en/weed-index/view/id/AMBTR
Resistant to: glyphosate
Number of field locations: 48
Locations: Essex, Kent and Lambton counties.

Canada fleabane:

http://www.weedinfo.ca/en/weed-index/view/id/ERICA
Resistant to: glyphosate
Number of field locations: 77
Location: Essex, Kent, Lambton and Elgin counties.

Resistant to: both glyphosate and FirstRate (group 2)
Number of field locations: 77
Location: Essex, Kent, Lambton and Elgin counties.

The presence of Canada fleabane that is resistant to both glyphosate and FirstRate is not surprising. Fortunately tillage will effectively take out fleabane prior to planting.

2012 Testing at the University of Guelph

The following weed species were submitted this fall and screened in March. Of significance is the detection of the first group 1 resistant grass species, large crabgrass, in Essex county that had survived applications of Poast Ultra (sethoxydim).There continues to be a growing number of resistant populations in Eastern Ontario.

Common ragweed:

http://www.weedinfo.ca/en/weed-index/view/id/AMBEL
Resistant to: Pursuit (imazethapyr), Classic (Chloriumuron), FirstRate (cloransulam), Peak (prosulfuron) and Refine SG (tribenuron/ thifensufuron).
Number of samples submitted: 26
Number of samples resistant: 23 (88%)

Green foxtail:

http://www.weedinfo.ca/en/weed-index/view/id/SETVI
Resistant to: Pursuit (imazethapyr), Accent (nicosufuron), Option (foramsulfuron) and Ultim (nicosufuron/rimsulfuron).
Number of samples submitted: 2
Number of samples resistant: 2 (100%)

Lambs quarters:

http://www.weedinfo.ca/en/weed-index/view/id/
CHEALNumber of samples submitted: 6
Number of samples resistant: 0 (0%)

2012 Testing Results for Herbicide Resistant Weeds

...continued

Large crabgrass:

http://www.weedinfo.ca/en/weed-index/view/id/DIGSA

Resistant to: Poast (sethoxydim), Assure II (quizalofop) and other group 1 herbicides.
Number of samples submitted: 1
Number of samples resistant: 1 (100%)

Nightshade, Eastern black:

http://www.weedinfo.ca/en/weed-index/view/id/SOLPT

Resistant to: Pursuit (imazethapyr).
Number of samples submitted: 9
Number of samples resistant: 6 (67%)

Pigweed:

http://www.weedinfo.ca/en/weed-index/view/id/AMAPO

Resistant to: Pursuit (imazethapyr), Classic (Chloriumuron), FirstRate (cloransulam), Pinnacle (thifensulfuron), Peak (prosulfuron), Refine SG (tribenuron/thifensufuron), Accent (nicosufuron), Option (foramsulfuron) and Ultim (nicosufuron/rimsulfuron).
Number of samples submitted: 30
Number of samples resistant: 17* (57%)

*1 sample was resistant to Aatrex 480 (atrazine), Sencor (metribuzin) and all of the other group 2 herbicides listed above.

Resistant to: Aatrex 480(atrazine) and Sencor (metribuzin).
Number of samples submitted: 1
Number of samples resistant: 1 (100%)

A huge thank-you to Francois Tardif, Peter Sikkema and the excellent graduate student team that are working on strategies for minimizing the impact of these resistant species.

Subscribe on-line to receive notice by email when a new issue of CropPest is posted. All you need to do is enter your email address at http://www.omafra.gov.on.ca/english/subscribe/index.html and submit.

To receive a fax version of CropPest, send your fax number to: OMAFRA, Ridgetown Resource Centre, Box 400, 120 Main Street, East Ridgetown, ON N0P 2C0 or fax to 519-674-1564.

Everyone Knows It's Windy

Doug Young, University of Guelph, Ridgetown Campus

Monday April 24, 2012 was a reminder that wind erosion can be a serious issue in Ontario (photo 1). Soils are most vulnerable to wind erosion when they are bare or when crops are newly emerged.

Wind erosion creates a nuisance which must be cleaned up (photo 3). Wind erosion also affects the current crop by exposing seed and sandblasting leaves of emerged crops. Wind erosion can also create long term negative effects including loss of nutrients from soils, loss of organic matter and loss of productivity.

It doesn't have to be so. Preventing wind erosion uses similar techniques to preventing water erosion. A windshield survey on Monday April 24, 2012 indicated that fields with about 30% residue cover did not have visible soil movement (photo 2, right). Just a little bit of residue cover can make a big difference in the amount of wind erosion loss in a field. Farmers should aim for 30% residue cover after planting to reduce both wind and water erosion significantly.

Figure 1. Wind erosion south of Ridgetown, Ontario April 23, 2012

Figure 2 and 3. Field with little residue cover (left) showing significant wind erosion compared to a field with some residue cover (right). Note that the corn stalks have blown off the field on the right, but there is little visible soil movement (Photo April 23, 2012)

Figure 4. Grass strip filled with soil on the margin of a field the day after a major wind storm (April 24, 2012)

Weevils and Whatnot!

Tom Cowan, Field Crop Entomologist, OMAFRA, Ridgetown

There have been some reports of alfalfa weevil causing damage in some stands and I was out this week to have a look at some fields. The weevils are certainly out there. Considering that some alfalfa fields are hurting from frost damage, some produces may consider holding off on the first cut to let the plants build up more reserves in the crown. Typically, cutting is a good method of control and is done before weevil populations get too high. If the stand needs to be left longer, then monitoring for weevil populations should be done to determine if treatment thresholds are reached prior to cutting especially in fields with a history of alfalfa weevil damage.

Scouting for Weevil

If there is 40% leaf-tip feeding, with 2 or 3 active weevils per stem and there is more than 7-10 days to preferred harvest date, consider applying an insecticide. If you find less then 1 active larvae per stem no treatment is needed but keep monitoring the situation. Action will be required if you find two larvae per stem and the alfalfa is less then 40 cm high. If you find more than 3 larvae per stem, immediate action is needed. For more information see check out the following link: http://www.omafra.gov.on.ca/english/crops/pub812/3weevil.htm

True Armyworm

There are some reports of true armyworm catches in Illinois and Pennsylvania so it looks like we should be seeing some adults soon if they are not already here. Considering the weather conditions we've had this spring, it might be a good idea to start scouting for this pest soon. More information on true army worm and scouting techniques can be found at: http://www.omafra.gov.on.ca/english/crops/pub811/13cereal.htm#armyworm

Don't forget! If the corn is up, it is time to start scouting for black cutworm!

Efficacy of Wheat Fungicides

Albert Tenuta, Field Crop Pathologist, OMAFRA, Ridgetown

There are many different diseases caused by various fungal pathogens that affect cereals in Ontario and some such as the foliar diseases (powdery mildew, leaf/stripe rust, Septoria leaf spot, Septoria (Stagonospora) glume blotch and tan spot) and Fuarium Head Blight (FHB) can cause significant yield losses if not managed correctly. Although these diseases occur in all wheat producing areas of the province, their economic impact varies from year to year depending on environmental conditions, variety grown, crop rotation, etc. When the environmental conditions favour the development of these pathogens, local losses can be significantly greater.

The North Central Regional Committee on Management of Small Grain Diseases (NCERA-184) has developed the following information on fungicide efficacy for control of certain foliar diseases of wheat for use by the grain production industry in the U.S and Ontario. Efficacy ratings for each fungicide listed in the table were determined by field testing the materials over multiple years and locations by the members of the committee. Efficacy is based on proper application timing to achieve optimum effectiveness of the fungicide as determined by labeled instructions and overall level of disease in the field at the time of application. Differences in efficacy among fungicide products were determined by direct comparisons among products in field tests and are based on a single application of the labeled rate as listed in the table. The Table includes most widely marketed products, and is not intended to be a list of all labeled products. Please refer to OMAFRA Publication 812 – Field Crop Protection Guide for a full list of available products in Ontario.

Management of Small Grain Diseases
Fungicide Efficacy for Control of Wheat Diseases (NCERA-184)

Albert Tenuta, Field Crop Plant Pathologist,
OMAFRA, Ridgetown

Efficacy of fungicides for wheat disease control based on appropriate application timing

Class	Active Ingredient	Product	Powdery mildew	Stagonospora leaf/glume blotch	Septoria leaf blotch	Tan spot	Stripe rust	Leaf rust	Stem rust	Head scab
Strobilurin	Pyraclostrobin 23.6%	Headline SC	G	VG	VG	E	E[2]	E	G	NL
Triazole	Metconazole 8.6%	Caramba 0.75 SL	VG	VG	–[3]	VG	E	E	E	G
	Propiconazole 41.8%	Tilt 3.6 EC[4]	VG	VG	VG	VG	VG	VG	VG	P
	Prothioconazole 41%	Proline 480 SC	–[3]	VG	VG	VG	–[3]	VG	VG	G
	Tebuconazole 38.7%	Folicur 3.6 F[4]	G	VG	VG	VG	E	E	E	F
	Prothioconazole15% Tebuconazole 15%	Prosaro 421 SC	G	VG	VG	VG	E	E	E	G
Mixed mode of action	Metconazole 7.4% Pyraclostrobin 12%	TwinLine 1.75 EC	G	VG	VG	E	E	E	VG	NL
	Propiconazole 11.7% Azoxystrobin 7.0%	Quilt 200 SC	VG	VG	VG	VG	E	E	VG	NL
	Propiconazole 11.4% Trifloxystrobin 11.4%	Stratego 250 EC	G	VG	VG	VG	VG	VG	VG	NL
	Prothioconazole 10.8% Trifloxystrobin 32.3%	Stratego YLD	G	VG	VG	VG	VG	E	VG	NL
	Tebuconazole 22.6% Trifloxystrobin 22.6%	Absolute 500 SC	G	VG	VG	VG	VG	E	VG	NL

[1] Efficacy categories: NL=Not Labeled and Not Recommended; P=Poor; F=Fair; G=Good; VG=Very Good; E=Excellent.
[2] Efficacy may be significantly reduced if solo strobilurin products are applied after stripe rust infection has occurred
[3] Insufficient data to make statement about efficacy of this product
[4] Multiple generic products containing the active ingredients propiconazole and tebuconazole may also be labeled in some states/provinces.

This information is provided only as a guide. It is the responsibility of the pesticide applicator by law to read and follow all current label directions. No endorsement is intended for products listed, nor is criticism meant for products not listed. Members or participants in the NCERA-184 committee assume no liability resulting from the use of these products.

....continued from Page 1

for doing so, based on public research trials, is the combination of glyphosate and chlorimuron (Products include: Guardian, glyphosate + Classic or glyphosate + Chaperone). I cannot stress enough that this is not a fast acting treatment and often takes 2-3 weeks before you start seeing some decent control. Glyphosate (360 g/L) at 2 L/ac is also slow but effective at controlling established dandelions. Glyphosate will not inhibit germination of new seedlings. The information below shows a breakdown of all pre-plant herbicide treatments tested in public research trials for the control of dandelion. It is important to note that with the exception of chlorimuron (Classic, Chaperone) and Amitrol 240, all other herbicides tank-mixed with the 1L/ac rate of glyphosate (260 g/L) did not improve the control of dandelion when compared to the 1 L/ac rate of glyphosate (360 g/L) on its own. Therefore if you find value in those tank-mix partners for other weed issues, you will need to increase the rate of glyphosate to get adequate dandelion control.

Ranking of herbicide treatments for control of established dandelion at 8 weeks after application:

1. glyphosate (360 g/L) at 2 L/ac:
   - average control: 90%, range in control: 78-97%, based on: 4 trials
2. glyphosate (360 g/L) at 1 L/ac + chlorimuron (Classic, Chaperone) at 14.4 g/ac
   - average control: **89%**, range in control: **82-96%**, based on: **5 trials**
3. glyphosate (360 g/L) at 1 L/ac + Amitrol 240 at 1.68 L/ac
   - average control: **85%**, range in control: **66-100%**, based on: **6 trials**
4. glyphosate (360 g/L) at 1 L/ac
   - average control: **80%**, range in control: **55-100%**, based on: **8 trials**
5. glyphosate (360 g/L) at 1 L/ac + Eragon at 14.4 g/ac + Merge 0.5% v/v
   - average control: **71%**, range in control: **63-88%**, based on: **4 trials**
6. glyphosate (360 g/L) at 1 L/ac + Valtera at 56 g/ac
   - average control: **68%**, range in control: **58-91%**, based on: **4 trials**

Source: University of Guelph (Dr's Sikkema, Swanton and Tardif)

Scenario 2: The dandelion pressure is horrific! I just want to burn it off as quickly as possible so that I can plant into a semi-decent seedbed.

If you were to walk into any one of these trials at 7-10 days after application certain treatments would stand out, specifically glyphosate tank-mixes that include a group 14 herbicide such as Eragon (saflufenacil) or Valtera (flumioxazin). Herbicides in this particular mode of action will burn leaf tissue very quickly and the results are visually appealing when compared to either glyphosate alone or glyphosate + chlorimuron (Classic, Chaperone). The pictures below were taken yesterday (May 9, 2012) from a comparative trial at the Elora Research Station. However, our experience has been that when dandelion control is evaluated later in the season, the slower acting herbicides ultimately provide better control.

....continued from Page 9

Figure 1. An un-sprayed dandelion plot on May 9/12

Figure 2. Dandelion control at 10 days after an application with glyphostate 360 g/L at the 2L/ac rate

Figure 3. Dandelion control at 10 days after an application of Guardian (glyphosate + chlorimuron)

Figure 4. Dandelion control at 10 days after an application of Guardian Plus (glyphosate + chlorimuron + flumioxazin)

Figure 5. The difference in dandelion control in 10 days after an application of Guardian (left) compared to guardian Plus (right)